

11 - the analytical unit transmits at least one of the parameters ( $c_1, c_2, c_3 \dots c_m \dots c_M$ ) to the signal

12 processing unit;

13 - the analytical unit transmits at least one of these parameters ( $c_1, c_2, c_3 \dots c_m \dots c_M$ ), over an

14 existing connecting line (A) between the sensor unit and the analytical unit;

15 - the sensor-signal processing unit adjusts the transmitted parameters ( $c_1, c_2, c_3 \dots c_m \dots c_M$ ).

1 11. The method of claim 10, characterized in that at least one newly transmitted parameter

2 ( $c_1, c_2, c_3 \dots c_m \dots c_M$ ) is transmitted through the connecting line (A), through which the signal

3 (Out) processed in the sensor-signal processing unit is transmitted to the analytical unit.

12. The method of claim 11, characterized in that at least one newly determined parameter  
( $c_1, c_2, c_3 \dots c_m \dots c_M$ ) is transmitted through a common power supply line (V) for the sensor system  
and the analytical unit.

13. The method of claim 12, characterized in that a necessary change of a parameter ( $c_1, c_2,$   
 $c_3 \dots c_m \dots c_M$ ) is transmitted to the sensor-signal processing unit during running operation only if  
the transmission of the signals (Out) from the sensor-signal processing unit is not disturbed  
thereby.

14. The method of claim 13, characterized in that a necessary change of a parameter ( $c_1, c_2,$   
 $c_3 \dots c_m \dots c_M$ ) is transmitted through the common power supply line (V) for the sensor system and  
the analytical unit.

15. The method of claim 14, characterized in that at least one parameter ( $c_1, c_2, c_3 \dots c_m \dots c_M$ )

2 is transmitted by a change of an output load ( $I_{load}$ ) between the signal processing unit and the  
3 analytical unit.

1 16. The method of claim 15, characterized in that the output load ( $I_{load}$ ) is varied continuously.

1 17. The method of claim 16, characterized in that the output load ( $I_{load}$ ) is varied stepwise.

1 18. The method of claim 17, characterized in that at least one parameter ( $c_1, c_2, c_3 \dots c_m \dots c_M$ )  
2 is transmitted by a change of the supply voltage ( $U_s$ ) for the sensor unit.

1 19. Application of claim 18 to generally programmable systems.

20. Application of the method of claim 10 for acquiring the measurement data of magnetic  
field signalas.